

April 7, 2014

Via Electronic Filing

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12th Street, S.W.  
Room TW-A325  
Washington, DC 20554

**Re: Comments of CVIN, dba Vast Networks, to Public Notice –Wireline Competition  
Bureau Seeks Focused Comment on E-Rate Modernization, Released March 6, 2014, WC  
Docket No. 13-184**

**Summary**

CVIN, dba Vast Networks, (“CVIN”) is responding to the Commission’s invitation to “stakeholders to offer examples of projects for which they would seek funding if the Commission adopts such an approach,” Public Notice, paragraph 26. CVIN has infrastructure through many rural areas in California’s Central Valley which was installed with the help of an ARRA grant. CVIN works with many rural schools and extends infrastructure into area whenever it is economically feasible. There are many rural schools and libraries that simply will not get improved access to broadband services without some level of subsidization. The upfront capital costs and extended payback periods required to extend services to these areas is the primary barrier that prevents a service provider from bridging the digital divide between urban and rural communities. CVIN is proposing pilot demonstration projects that E-rate subsidizes part of the construction costs to extend facilities to rural areas. In exchange, CVIN will commit to offer services at reduced rates to schools and libraries with pricing guaranteed for 10 years.

## Table of Contents

I.	Overview .....	2
II.	Background .....	3
III.	Pilot Area #1 – Tulare County .....	4
	a. Construction required.....	5
	b. Cost Summary.....	9
	c. Services .....	10
IV.	Pilot Area # 2 Allensworth .....	11
	a. Construction required.....	11
	b. Cost Summary.....	12
	c. Services .....	12
V.	Pilot Area # 3 Kern County .....	13
	a. Construction Required .....	14
	b. Cost Summary.....	18
	c. Services .....	18
VI.	Closing .....	19

## I. Overview

CVIN, dba Vast Networks has infrastructure through many rural areas in California’s Central Valley which was installed with the help of an ARRA grant. We work with many rural schools and extend infrastructure into area whenever it is economically feasible. There are many rural schools and libraries that simply will not get improved access to broadband services without some level of subsidization. For the pilot programs, CVIN has proposed that E-rate subsidizes part of the construction costs to extend facilities to rural areas. In exchange, we will commit to offer services at reduced rates with pricing guaranteed for 10 years. The upfront capital costs and extend payback periods required to extend services to

these areas is the primary barrier that prevents a service provider from bridging the digital divide between urban and rural communities.

## **II. Background**

CVIN is a CLEC who provides facilities based Internet and Telephone services utilizing our existing 2,000 mile fiber optic network in 23 counties in California. We primarily serve the Central Valley of California.

**The California Central Valley is one of the world's most productive agricultural regions.** On less than 1 percent of the total farmland in the United States, the Central Valley produces 8 percent of the nation's agricultural output by value. And yet, with all this abundance, **close to 57% of the Valley is classified as either unserved or underserved by broadband infrastructure.**

With a per capita income in 2007 of \$29,790, **29% below the state average**, a labor force growing faster than job growth with **2002-2008 unemployment rates averaging 2.6% higher than the state average** and the region's **wages being lower than the state average in every industry**, now, more than ever, this region requires the tools, resources and potential job growth **a robust network infrastructure built throughout the region** could provide.

In 2010, CVIN was awarded an ARRA grant to deploy a 1,371-mile fiber backbone network through 18 Central Valley counties. The network, consisting of 720 newly constructed miles of fiber and the leasing of 164 miles of dark fiber, provides Internet backbone service to Amador, Calaveras, Colusa, El Dorado, Fresno, Kings, Kern, Mariposa, Merced, Madera, Nevada, Placer, San Joaquin, Stanislaus, Sutter, Tuolumne, Tulare, and Yuba counties. As part of this project, CVIN serves 63 community anchor institutions, including seven public safety entities, 19 K-12 county offices of education that aggregate over 1,800 schools, 20 libraries, 14 community colleges and the Bakersfield, Fresno, and Stanislaus campuses of the California State University.

In addition, CVIN is a facilities-based (Fiber to the Premise) carrier throughout our serving territories for commercial as well as traditional and wireless carriers. One of our core businesses is delivering fiber solutions to rural schools both to deliver Internet services and to create WAN between all the schools within a District to facilitate the efficient dissemination of bandwidth across the districts.

CVIN has the necessary backbone and capacity to expand into many of the rural high cost areas that have a great need. CVIN is interested in conducting experiments in four areas covering six census tracts that are in desperate need of improved access.

### **III. Pilot Area #1 – Tulare County**

The proposed pilot area consists of three communities that are currently underserved and struggle to get adequate bandwidth for the schools and libraries. The project would extend fiber optic services from our existing backbone to each of these communities.

#### **Lemon Cove**

Lemon Cove has a population of 308 according to 2012 Census data. The medium income is \$30,722 compared to over \$57,000 for California as a whole.

Proposed Connections:

Sequoia Union Elementary School

#### **Woodlake**

Woodlake has a population of 7,389 according to 2012 Census data. The medium income is \$30,261 compared to over \$57,000 for California as a whole. The community is over 87% Hispanic with only 53.2% of the population over 25 having completed high school. Only 5% of the population has a bachelor's degree. 38% of the work force is in agriculture or are laborers.

Proposed Connections:

Woodlake Elementary School District

Woodlake Valley Middle School

Woodlake High School

Bravo Lake High School

Francis J. White Learning Center

Castle Rock Elementary

Woodlake Branch Library

**Three Rivers**

Three Rivers has a population of 2,182 according to 2012 Census data. The medium income is \$58,814 compared to over \$57,000 for California as a whole. The community is over 8.7% minority population with 96.7% of the population over 25 having completed high school. With 39.4% of the population has a bachelor's degree.

Proposed Connections:

Three Rivers Union School District

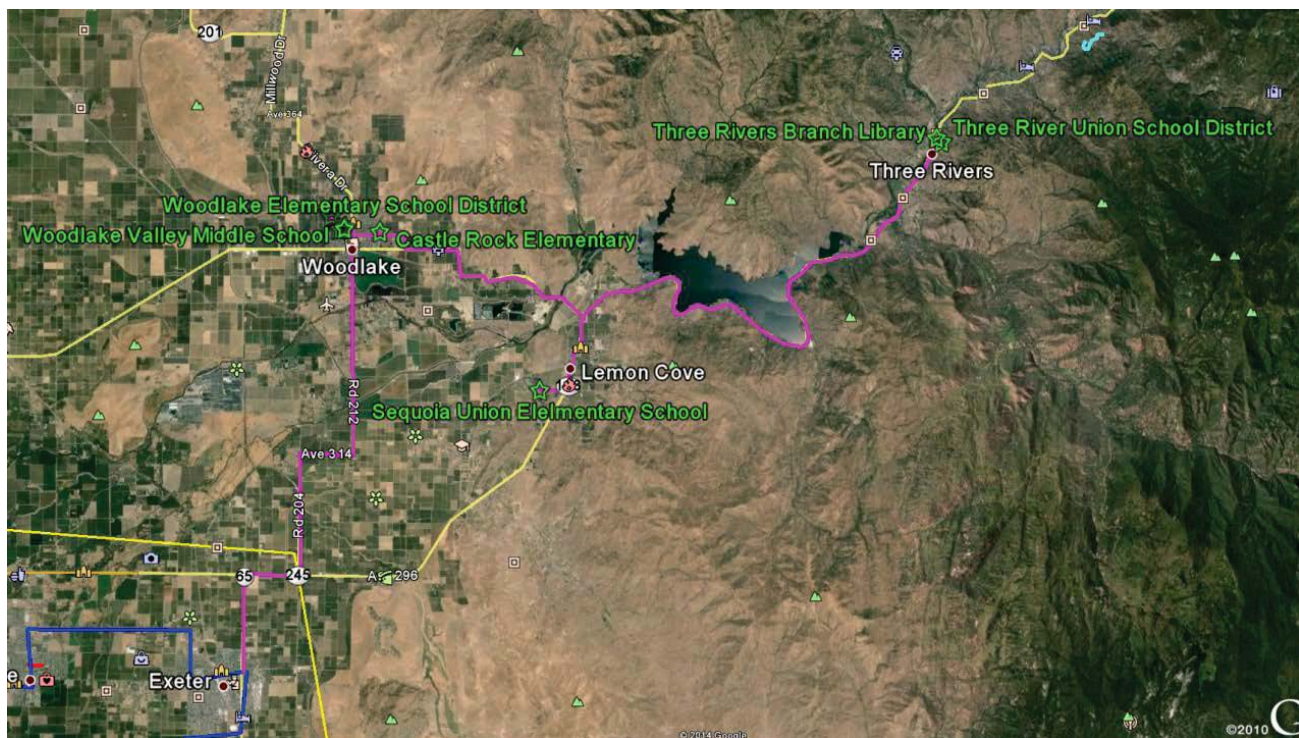
Three Rivers Branch Library

**a. Construction required**

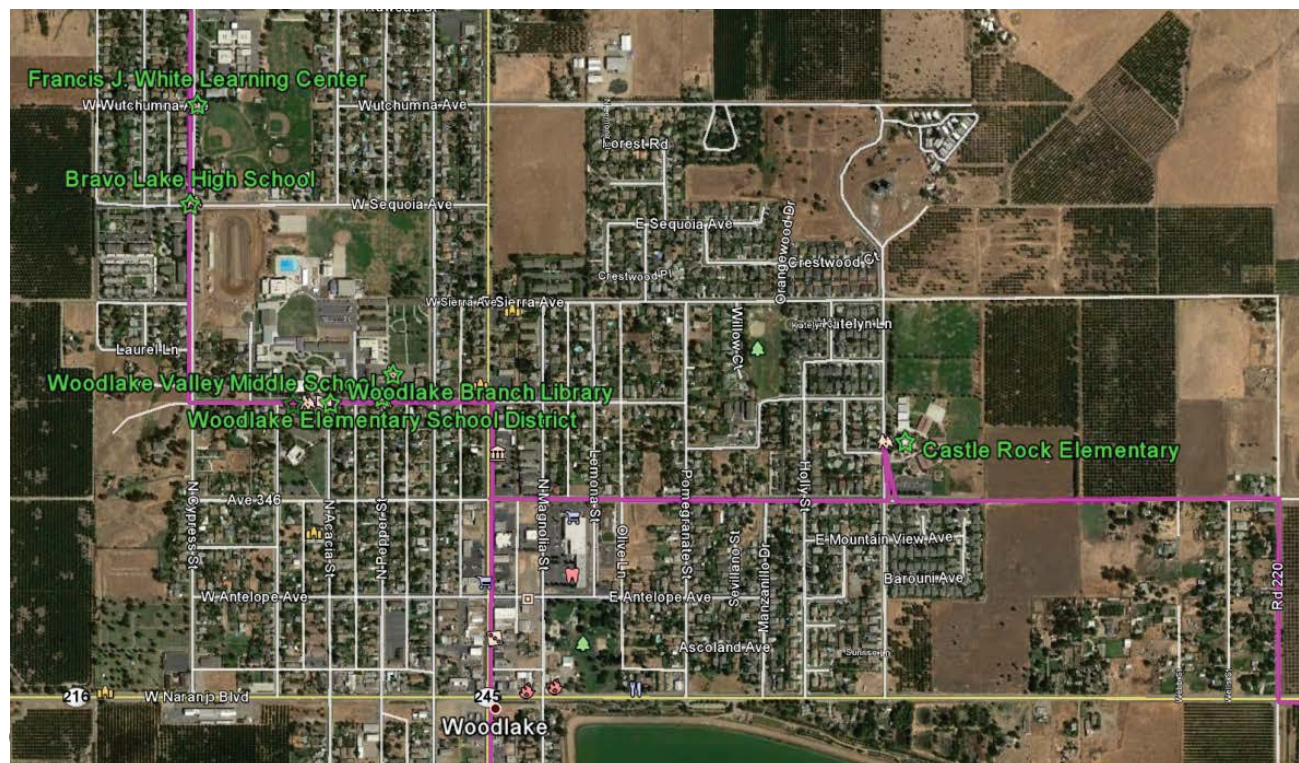
In order to provide services to these underserved areas. CVIN would have to construct 29.81 miles of new infrastructure. The map below depicts the new construction in pink, our existing backbone is shown in blue.



## Overview Map



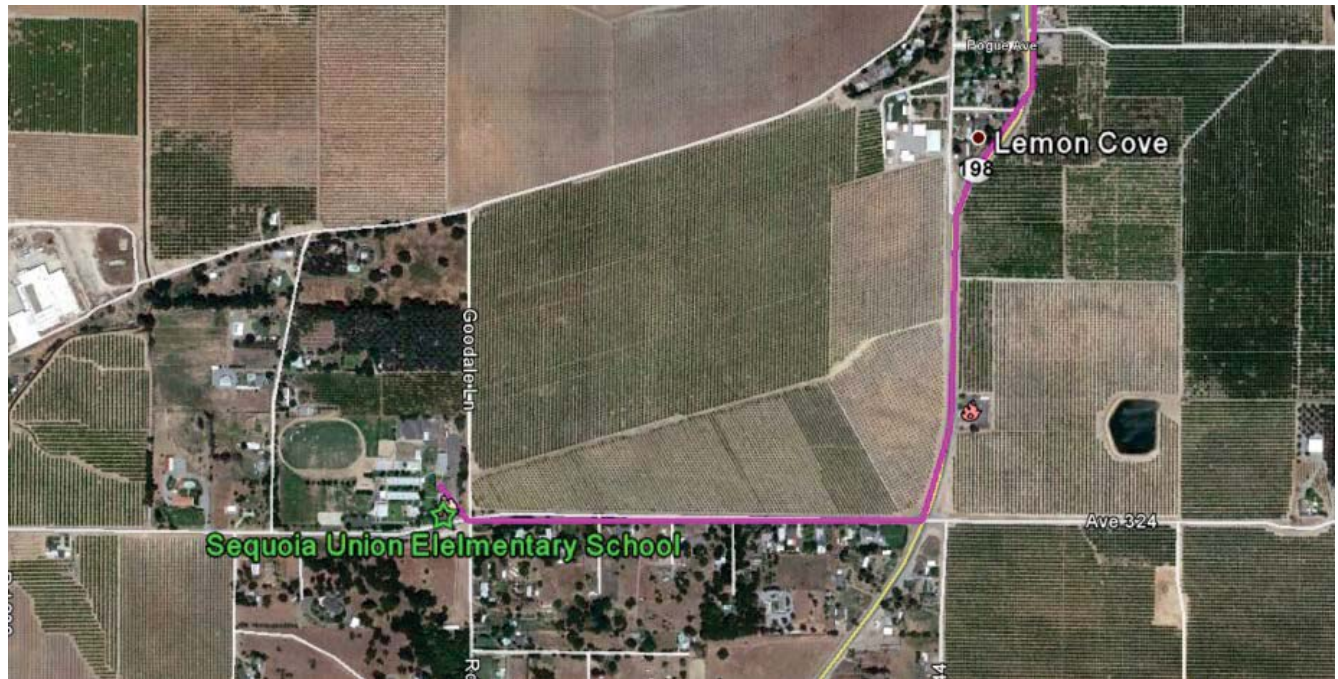
## Woodlake



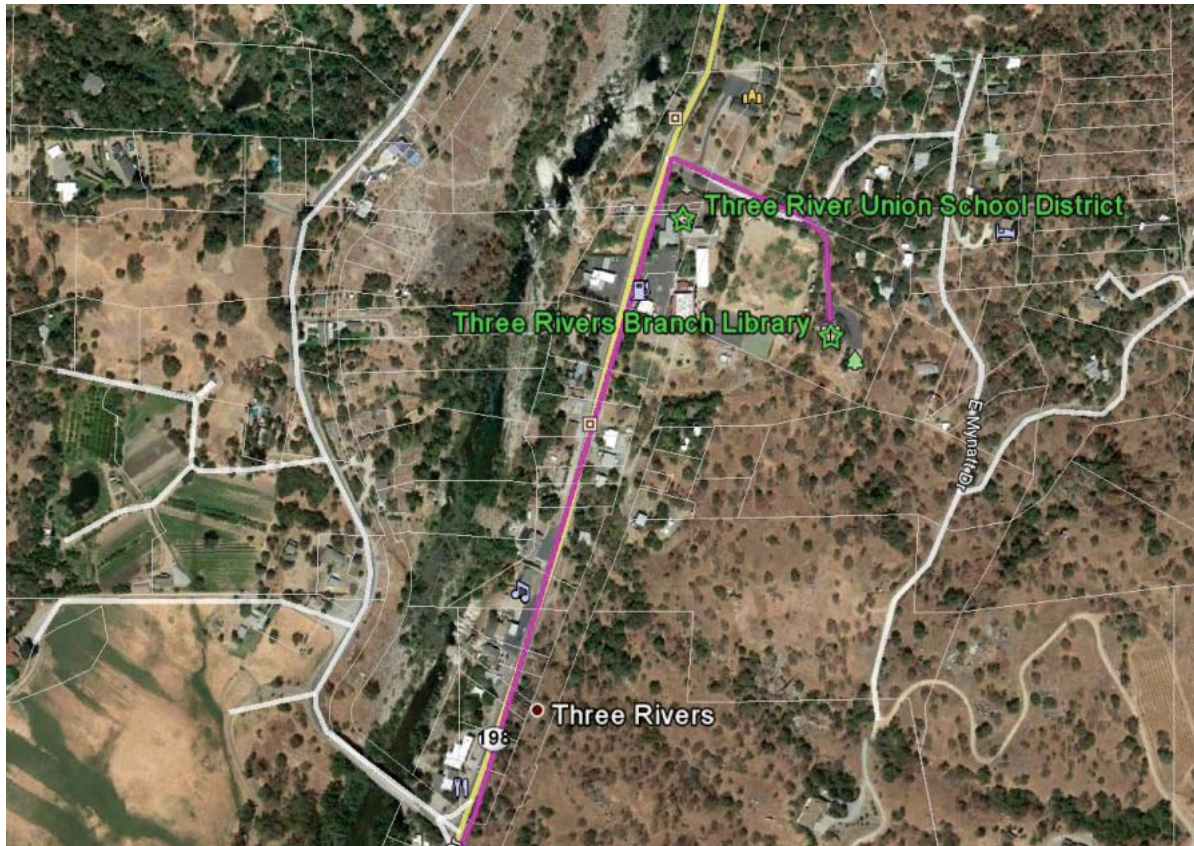
WC Docket No. 13-184, Filed April 7, 2014.



## Lemon Cove



## Three Rivers





## b. Cost Summary

The terrain for this project varies from dirt to rock as you move up towards the Sequoia National Forest in route to Three Rivers. We have estimate the amount and type of construction required to complete the project. We are asking for 70% of the initial costs to be paid by E-rate, 10% by California Advanced Services Fund and 20% by CVIN. These costs include all engineering, environmental, and permitting fees that we anticipate would be required to construct the facilities.

<b>Tulare County</b>	
<b>Route</b>	<b>Cost</b>
<b>Engineering, Enviornmental, Permitting</b>	\$ 220,355.52
<b>Materials</b>	\$ 393,492.00
<b>Installation</b>	\$ 5,254,429.84
<b>Electronics</b>	\$ 250,000.00
<b>Total Costs</b>	<b>\$6,118,277.36</b>
<b>Erate Pilot Program (70%)</b>	<b>\$4,282,794.15</b>
<b>California Advance Services Fund (10%)</b>	<b>\$ 611,827.74</b>
<b>CVIN Contribution (20%)</b>	<b>\$1,223,655.47</b>
<b>Totals</b>	<b>\$6,118,277.36</b>

### c. Services

The services would be consistent with the current connectivity model utilized in K-12 and the library system in California. We currently provide large bandwidth services to the Tulare County Office of Education and San Joaquin Valley Library System. We would provide point to point connectivity from the School Districts to the Tulare County Office of Education and from the Libraries to the San Joaquin Valley Library System main branch in Fresno. In Woodlake, we would create a Wide Area Network between all the school sites as well as the point to point to Tulare County Office of Education. We would commit to honor the following reduced rate pricing for 10 years. These rates are far below what these services can be purchased for in major metropolitan markets.

CIR (Mbps)	Monthly Recurring Rate
100 Mbps	\$ 850.00
500 Mbps	\$ 1,500.00
750 Mbps	\$ 1,875.00
1 Gbps	\$ 2,000.00
10 Gbps	\$ 8,500.00

#### IV. Pilot Area # 2 Allensworth

##### Allensworth

Allensworth has a population of 436 according to 2012 Census data. The median income is \$17,083 compared to over \$57,000 for California as a whole. The community is over 92.6% Hispanic with an unemployment rate of 50.7%. This is a school that only has access to an unreliable T1 service. This District has reached out to us on a number of occasions looking for any solution to its connectivity issues.

##### a. Construction required

In order to provide services to these underserved areas, CVIN would have to construct 9.6 miles of new infrastructure. The map below depicts the new construction in pink, our existing backbone is shown in blue.





## b. Cost Summary

We are asking for 70% of the initial costs to be paid by E-rate, 10% by California Advanced Services Fund and 20% by CVIN. These costs include all engineering, environmental, and permitting fees that we anticipate would be required to construct the facilities.

Tulare County - Allensworth	
Route	Cost
Engineering, Enviornmental, Permitting	\$ 70,963.20
Materials	\$ 126,720.00
Installation	\$ 729,062.40
Electronics	\$ 50,000.00
<b>Total Costs</b>	<b>\$ 976,745.60</b>
Erate Pilot Program (70%)	\$ 683,721.92
California Advance Services Fund (10%)	\$ 97,674.56
CVIN Contribution (20%)	\$ 195,349.12
<b>Totals</b>	<b>\$ 976,745.60</b>

## c. Services

The services would be consistent with the current connectivity model utilized in K-12 system in California. We currently provide large bandwidth services to the Tulare County Office of Education. We would commit to honor the following reduced rate pricing for 10 years. These rates are far below what these services can be purchased for in major metropolitan markets.

CIR (Mbps)	Monthly Recurring Rate
100 Mbps	\$ 850.00
500 Mbps	\$ 1,500.00
750 Mbps	\$ 1,875.00
1 Gbps	\$ 2,000.00
10 Gbps	\$ 8,500.00

## **V. Pilot Area # 3 Kern County**

The proposed pilot area consists of four communities that are currently underserved and struggle to get adequate bandwidth for the schools and libraries. The project would extend fiber optic services from our existing backbone to each of these communities.

### **Lamont / Weedpatch**

Lamont has a population of 15,120 according to 2012 Census data. The median income is \$33,120 compared to over \$57,000 for California as a whole. The community is over 94.5% Hispanic with only 36% of the population over 25 having completed high school. Only 2.9% have a Bachelor's Degree. 44% of the population works in Agriculture.

#### **Proposed Connections:**

Mountain View Middle School

Lamont School District

Nueva Continuation School

Lamont Branch Library

Vineland School District

Sunset Elementary

Sunset Middle School

Vineland Elementary

### **Lebec / Gorman**

Lebec / Gorman has a population of 1,808 according to 2012 Census data. The median income is \$40,302 compared to over \$57,000 for California as a whole. The community is over 33% minority population 80.7% of the population over 25 having completed high school. Only 9.8% have a Bachelor's Degree.

Proposed Connections:

El Tejon Elementary

Frazier Mountain High School

Gorman Elementary School

**a. Construction Required**

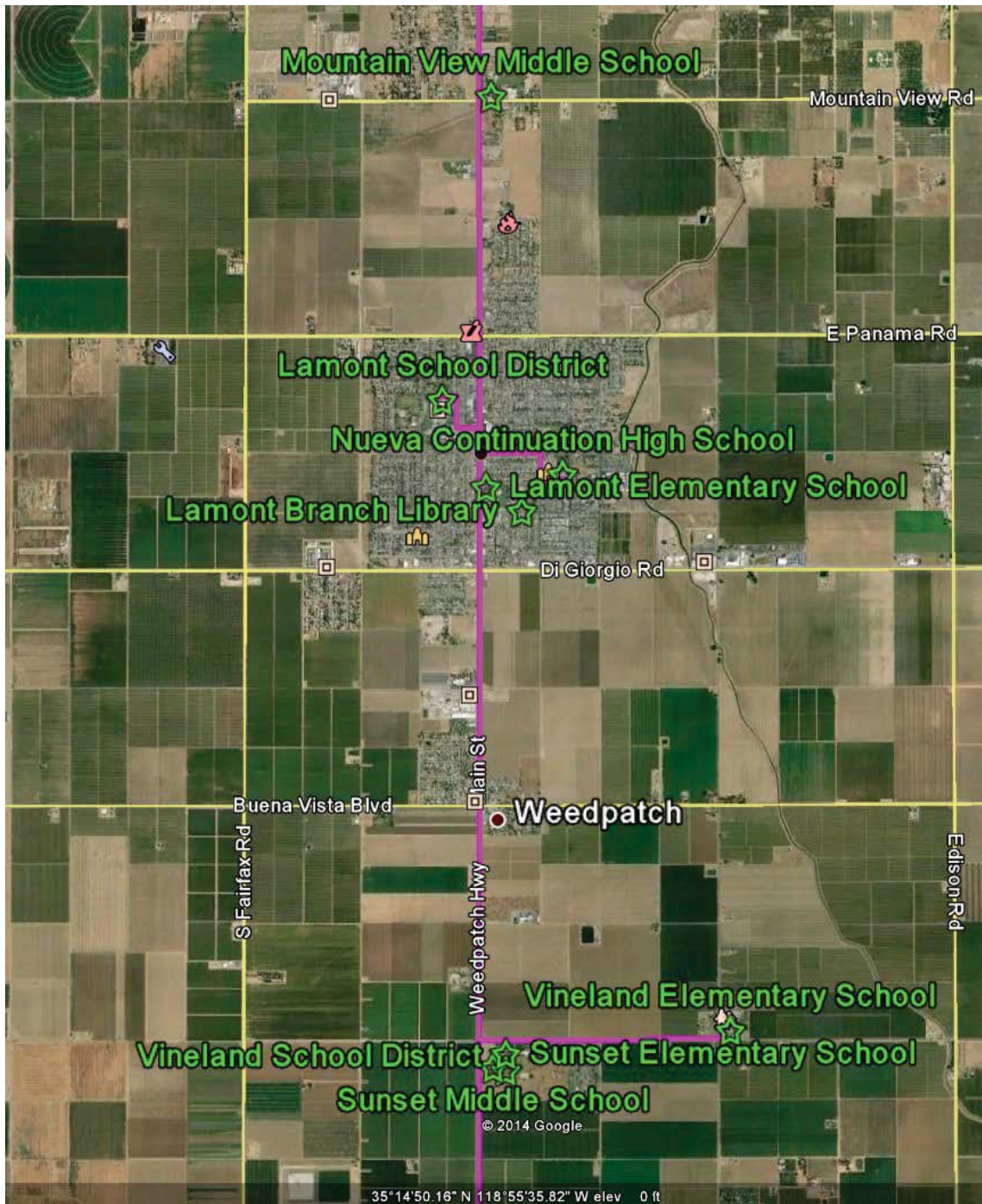
In order to provide services to these underserved areas, CVIN would have to construct 25.5 miles of new infrastructure. The map below depicts the new construction in pink, our existing backbone is shown in blue.



## Overview

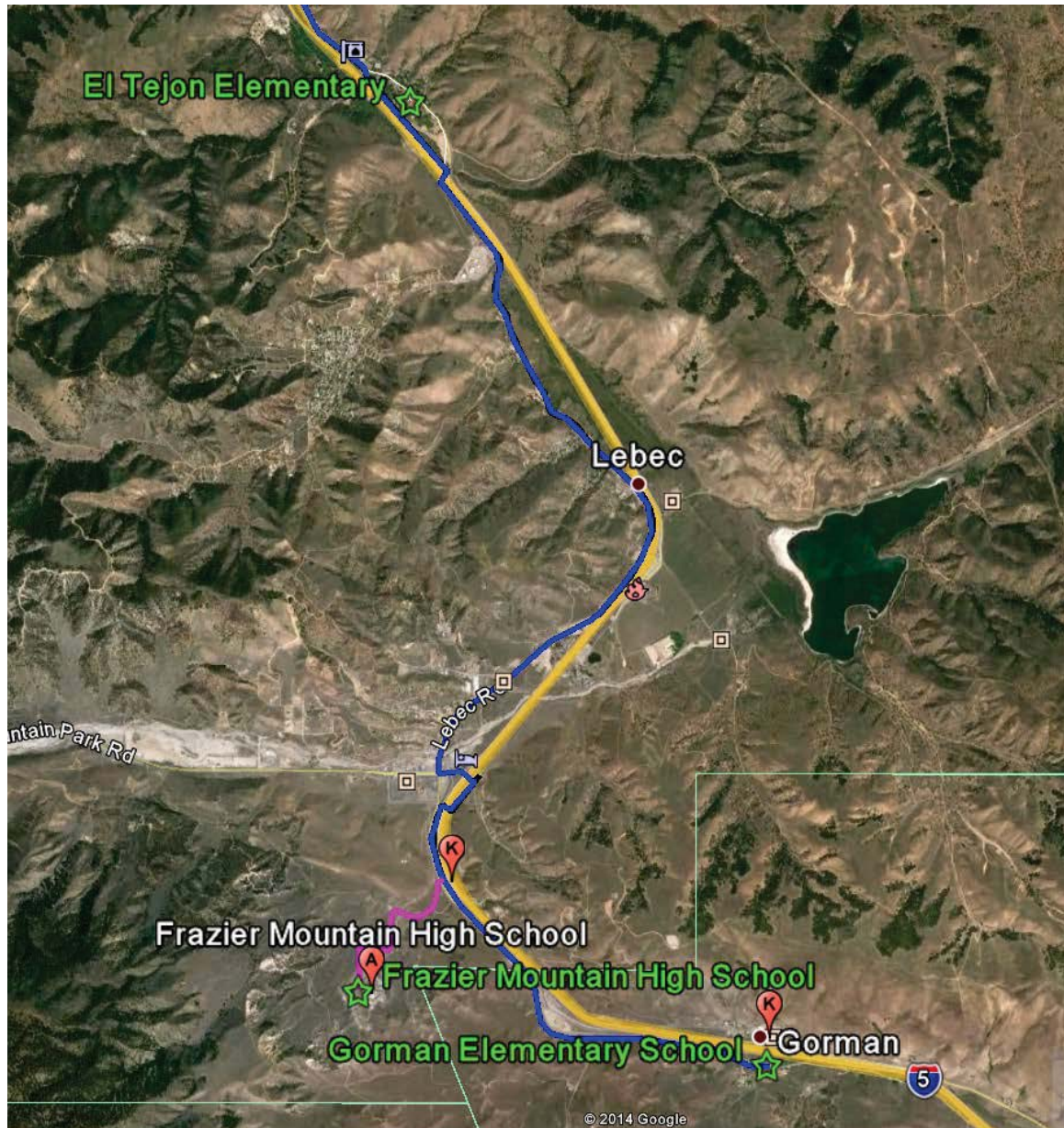


## Lamont / Weedpatch





**Lebec / Gorman**





## b. Cost Summary

<b>Kern County</b>	
<b>Route</b>	<b>Cost</b>
Engineering, Environmental, Permitting	\$ 188,496.00
Materials	\$ 336,600.00
Installation	\$ 3,808,068.00
Electronics	\$ 250,000.00
<b>Total Costs</b>	<b>\$4,583,164.00</b>
<b>Erate Pilot Program (70%)</b>	<b>\$3,208,214.80</b>
<b>California Advance Services Fund (10%)</b>	<b>\$ 458,316.40</b>
<b>CVIN Contribution (20%)</b>	<b>\$ 916,632.80</b>
<b>Totals</b>	<b>\$4,583,164.00</b>

## c. Services

The services would be consistent with the current connectivity model utilized in k12 system in California. We currently provide large bandwidth services to the Tulare County Office of Education. We would commit to honor the following reduced rate pricing for 10 years. These rates are far below what these services can be purchased for in major metropolitan markets.

<b>CIR (Mbps)</b>	<b>Monthly Recurring Rate</b>
<b>100 Mbps</b>	<b>\$ 850.00</b>
<b>500 Mbps</b>	<b>\$ 1,500.00</b>
<b>750 Mbps</b>	<b>\$ 1,875.00</b>
<b>1 Gbps</b>	<b>\$ 2,000.00</b>
<b>10 Gbps</b>	<b>\$ 8,500.00</b>

## VI. Closing

On behalf of CVIN we would like to thank the FCC for giving us the opportunity to submit this pilot demonstration project request. We are looking forward to submitting the actual proposal when directed to do so.

Sincerely,

A handwritten signature in blue ink, appearing to read "David Nelson", written in a cursive style.

David S. Nelson

CEO

CVIN. LLC., dba Vast Networks